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APPROVAL OF UNDP ASSISTANCE TO A PROJECT OF CAMBODIA

IPF:(1992-96) $105 319 000

(CMB/92/004) - Irrigation Rehabilitation Study

Date of approval by the AC:[1/]	**14 October 1992**
Expected duration:	**12 months**
Proposed Executing Agency:	**Government (The Mekong Secretariat)**
Lead Government Authority:	**The Supreme National Council of Cambodia (SNC)**
Implementing Agents:	**The Mekong Secretariat, the Department of Hydrology (Ministry of Agriculture)**
Proposed UNDP contribution:	**$1 067 600 Source of funds: IPF**
Total UNDP budget:	**$1 067 600**
Administrative and Operational Support Services (AOS)	**$85 400 Agency: The Mekong Secretariat**

Project background

In the predominantly agrarian society of Cambodia, the control and use of water to irrigate rice and field crops have traditionally been important to farmers for avoiding the effects of recurrent drought and ensuring higher agricultural productivity and food security. At present, it is estimated that 307,000 hectares are irrigated in the wet season and 103,000 hectares in the dry season. Water control and usage for agriculture in Cambodia ranges from the simple movement of water from one paddy to another, the retaining of receding floodwaters in the lowlands for dry season irrigation to the construction of dykes, reservoirs, diversion weirs and canal systems for the distribution of stored or diverted irrigation waters.

The irrigation tradition in Cambodia started centuries ago during the Angkor period when a relatively large and complex system of water diversions, canals and lakes were built in the Siem Reap area. The first "modern" irrigation schemes were developed during the French period (between 1930 and 1950) when gravity systems and flood protection dykes were constructed in Battambang, Siem Reap, Prey Veng and Kamong Cham provinces. During 1975 - 1979 the development of irrigation was taken to extremes. A countrywide network of canals, dykes and weirs was dug and constructed by forced manual labour. In many cases their design and layout were fundamentally flawed and are still detrimental to agriculture and the environment. Since 1979 until the late 1980s the irrigation sector received assistance from the former USSR, Vietnam and the NGO community.

Hydrology services have generally given high prority to the development of new irrigation schemes so as to increase rice production. The official target has been set nominally at 10,000 hectares per year for new irrigation coverage in order to achieve food self-sufficiency. However, due to the inherent problems in the irrigation structures, lack of expertise and equipment problems, the Department of Hydrology has tended to adapt an ad-hoc approach to repair and modify existing canals and irrigation schemes. Additionnaly, the floods of 1991 damaged many reservoirs, weirs and canal systems possibly affecting 100,000 hectares of irrigated land already

[1/] This Fact Sheet reflects the status of the project/revision at the time it was approved by the Action Committee; modifications to the project/revision may have occurred subsequently.

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setting back the official development target.

Due to the complex way in which water is utilized and the diverse development of irrigation systems in Cambodia it is difficult to assess with accuracy the current status of irrigation in the country. The main problems encountered in the sector can therefore be summarized as follows: (1) Absence of a comprehensive and technically correct inventory of the extent and physical status of irrigation structures; (2) Inadequate understanding of the actual and potential role or irrigation in Cambodia; (3) Extensive and overwhelming presence of badly designed and constructed irrigation systems which are very difficult to deal with in terms of needed rehabilitation, amelioration and/or decommissionning; (4) Consequent continuing environmental and farming system problems; and (5) An inadequate institutional capacity to undertake the planning, design, implementation of irrigation projects.

In spite of the strong interest expressed by the donor community to invest in the rehabilitation of the sector rehabilitation, plans have been held up due to the technical complexity of the many irrigation systems and structures in Cambodia and to the lack of information on the sector as a whole.

Description of project

The immediate objectives of the project are to: (a) produce a country-wide inventory of existing irrigation structures and systems, which will be conducted in two phases; (b) analyze the existing irrigation structures including, inter-alia, the potential of water and land resources, the social and socio-economic parameters of irrigated farming, the institutional capacity at the national and provincial levels and the impact on the environment; and (c) develop a prioritized list of projects for urgent rehabilitation.

Project activities will include: (a) making an inventory of 2,000 structures through extensive field investigations; (b) developing a more detailed questionnaire which will focus on a reduced number of systems (notionally between 200 - 300); (c) gathering data in greater detail on physical characteristics, size of land holdings, hectares covered, sketches, location, inter-linkages with other surronding hydraulic systems, population served, etc.; (d) reconciling data gathered through the inventory process with the data already available within the Departments of Hydrology and Land Use Mapping; (e) developing priority criteria on the information gathered from the inventory and analysis; and (f) preparing a set of pre-feasibility studies for urgent rehabilitation of 10 to 15 irrigation schemes to be urgently rehabilitated which will be presented to the donor community for funding.

Inputs

UNDP will provide 12 work-months for a senior irrigation engineer/CTA, 12 work-months for five United Nations Volunteers in the fields of irrigation engineering, hydrology, soils expertise, socio-economics and agronomy; a subcontract to provide the services of an irrigation study team; in-service training; expendable and non-expendable equipment; and miscellaneous costs.

Financial data

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Personnel	362 100
Subcontract	530 000
Training	10 000
Equipment	124 500
Miscellaneous	41 000
Total	1 067 600

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